WILDERNESS EVALUATION

Devils Gulch - 617039

20,476 Acres

OVERVIEW

History

This area has a history of unroaded motorized recreation. It was first studied under RARE II and was not recommended for wilderness at that time. It was not considered for wilderness designation during preparation of the Washington State Wilderness Act of 1984. The area was identified as an inventoried roadless area in the 1990 Wenatchee National Forest Land and Resource Management Plan.

The 2006 inventory removed approximately 6,884 acres from previous inventory due to nonconforming uses such as road construction and logging; 2,134 acres were added to the previous inventory as they met the criteria for a potential wilderness area (PWA) as described in Forest Service Handbook (FSH) 1909.12, Chapter 70. The Northwest Forest Plan (NWFP) allocates a portion of this area as a managed late successional area and most of the area as late successional reserve (LSR). A small portion of the area is administratively withdrawn. The following chart depicts the 1990 Land and Resource Management Plan direction for the 2006 inventoried areas.

Table 1--Management area percentages (rounded)

Wenatchee National Forest					
EW1	EW3	FS-Pen	SI2	ST1	ST2
8%	44%	1%	1%	4%	16%

Location and Access

The Devils Gulch potential wilderness area is located approximately 10 miles south of Cashmere, Washington, and approximately 10 miles southwest of Wenatchee, Washington. It lies within Chelan County on the Wenatchee River Ranger District. Road access is provided by Highway 97, the Mission Creek Road south of Cashmere, and the Liberty-Beehive Road south of Wenatchee. The Liberty-Beehive Road lies along the southern boundary of the area. Trails in the area include the Devils Gulch, Mission Ridge, Red Hill, Red Devil, and Tronsen Ridge Trails.

Geography and Topography

The Devils Gulch PWA lies within the headwaters of Mission Creek. It is roughly four miles wide and nine miles long. Elevations range from 1,600 to 6,500 feet. The land types associated with this area are structurally controlled mountain slopes with a number of

historic landslides in the southern portion of the area. Slope shape and orientation are generally controlled by underlying bedrock orientation, with dip slopes producing more gentle slopes than scarp slopes which may exhibit cliff faces. Precipitation averages between 15 to 25 inches per year with the majority falling as snow.

Current Uses

This area is currently used widely for dispersed recreation. Within the area there are approximately 50 miles of trail that all are open to motorized use. The area hosts one of the more popular motorbike and mountain bike trail systems on the Forest. These trails are also used by hikers and equestrians. The Forest Service has used this PWA for extensive research on the dry forest ecosystem.

Appearance and Surroundings

The area has moderate to high visual variety in landforms and in vegetation and rock forms, but with very little variety in lakes and streams. Large rockslides and outcrops provide contrast within the area. There is a variety of mixed conifers and larch on the higher elevation slopes near Mount Lillian and upper Mission Ridge. The ridge tops are open and have sparse vegetation on their south slopes. Dense vegetation is located in the drainage bottoms. The area is primarily viewed as both foreground and middle ground from Highway 97, and from the Liberty-Beehive and Mission Creek Roads, and as middle ground from the Tronsen Ridge, Mission Ridge, and Devils Gulch Trails.

Key Attractions

Mission Creek, commonly known as Devils Gulch, is the major drainage in this potential wilderness area. A well-known landmark attraction called Devils Slide occupies the steep, bare, vertical standing sandstone bedrock headwall in this drainage. The trail system in this area is a regional draw for mountain bikers and motorcyclists. Many publications refer to the Devils Gulch Trail as being the best mountain biking trail in the state.

CAPABILITY FOR WILDERNESS

Level of natural and undeveloped environment:

Timber harvest from earlier eras may or may not appear to be natural or undisturbed depending on perspective. Many portions of this area show no evidence of physical disturbance. In other portions of this area, the evidence of disturbance includes old tree stumps or revegetated roads that are no longer visible. From an ecological perspective, it is obvious that the dry forest stand structure and composition in this roadless area has been altered by fire exclusion and past harvest of large trees.

Impacts of past human activity in some areas are evident. A short logging road penetrated Mission Creek in the 1940s; the road followed the drainage and is evident in only a few locations. The Red Hill Trail crosses a piece of private land that has been roaded and logged. Portions of the trail system were specifically built for motorcycle travel. All of the trails in the PWA have considerable motorcycle and mountain bike use.

Limited noxious weed control occurs along the roads and at the trailheads accessing this area. There is no control of the weeds established within the area. Small weed populations are scattered along the trail system including diffuse knapweed.

The Devils Gulch PWA is impaired by light pollution from the Wenatchee area. The western portion of the PWA (90 percent of the PWA) rates a Class 4 on the Bortle Scale, whereas the eastern portion (10 percent of the PWA) rates as a Class 4.5. A Class 4 Rural/Suburban Transition Sky exhibits fairly obvious light-pollution domes over population centers in several directions. The Milky Way well above the horizon is still impressive but lacks all but the most obvious structure. Clouds in the direction of light pollution sources are illuminated but only slightly so, and are still dark overhead. Modest to serious impact to deep sky observing and imaging occurs. A Class 4.5 sky portrays the Milky Way as washed out but still visible on the horizon. Light domes from populated areas are up to 45 degrees above the horizon.

Water quality data is not available for most of the PWA; however, due to the relatively low level of disturbance water quality is assumed to be high. A portion of Sand Creek is classified by the Washington State Department of Ecology as Category 2, waters of concern, which means there is some evidence of a water quality problem, but it does not require a water quality cleanup plan. A portion of Mission Creek is classified by the Washington State Department of Ecology as Category 5, which means the area is in need of a water cleanup plan due to polluted waters.

Level of outstanding opportunities for solitude or primitive and unconfined recreation

The area has some opportunities for challenging experiences, but the easy access to the area, the lack of water, and the small size limit extensive overnight opportunities. Some opportunities exist for climbing the sandstone formations.

The trail system provides good opportunities for motorcycle and mountain bike riding. This area is currently available for use by larger groups than those permitted in wilderness.

The area offers some opportunities for solitude due to terrain, vegetative cover, and geologic character. However, weekends during the spring and fall are currently lacking in solitude due to the popularity of the trail system with mountain bikers and motorcyclists. This use would be prohibited if the area is designated wilderness. The main Devils Gulch area gives a feeling of being away from human activity or development other than places where the old roadbed can be seen. Ridge-top trails are generally within hearing distance of forest roads. Views from within the area are relatively free from human impact such as timber harvest, etc. The large sandstone cliff slide area located at the head of the gulch reinforces a feeling of naturalness and grandeur.

Special Features

The sedimentary outcrops of the Swauk and Chumstick formations found in this area are otherwise not represented in wilderness on the Wenatchee River Ranger District.

The area is within the North Cascades Grizzly Bear Recovery Zone, in the lynx secondary recovery area, and provides source habitat for wolverine. All of these species have very

limited distribution within the region. The area is also dry forest refugia for the northern spotted owl.

Tronsen Ridge, Mount Lillian, and Upper Naneum Meadow were reportedly used in prehistoric times for travel, food, and for the collection of household materials. There are no known archaeological sites, although field surveys have been limited. Historical uses include small-scale mining, trapping, and sheep grazing. Unless a site has been determined to be ineligible for the National Register, it is managed as a significant site until such a determination is made.

The rare plants that have been recorded in this area are cutleaf anemone (anemone nuttalliana), tortured horsehair lichen (*Bryoria tortuosa*), Thompson's pincushion (Chaenactis thompsonii), clustered lady's slipper (*Cypripedium fasciculatum*), longsepal wild hollyhock (*Iliamna longisepala*), and Whited's penstemon (*Penstemon eriantherus var. whitedii*). Trail relocations have been designed to avoid impacting populations of clustered lady's slipper.

Manageability of Boundaries

Most of the boundary follows ridgelines or valley bottom roads; these portions would be reasonable to manage and would also better allow for wildland fire use. A significant portion of the boundary does not lie on specific identifiable ground features, thus lending to difficulty of boundary management. Portions of this area would be extremely problematic to manage; the south end of the Tronsen Ridge Trail would exit out of wilderness into an area with motorized use.

AVAILABILITY FOR WILDERNESS

Recreation

This area is noted for unroaded single track mountain bike and motorcycle trail riding opportunities. The area is not exceptionally large, but the absence of developed facilities contributes to its primitive character. Good access to the area is provided by roads and trails, and there are opportunities for big game hunting, horseback riding, hiking, backpacking, motorcycle riding, mountain biking, nature study, and scenic viewing. The motorized and mechanized recreation that is popular in this area would be unavailable if the area was designated in the wilderness system.

The closest communities to the Devils Gulch PWA include Cashmere and Leavenworth. Both communities actively promote the Devils Gulch Trail for mountain biking on Chamber of Commerce websites, citing the trail as being the most popular for mountain biking in the state. The City of Cashmere has erected road signs to route visitors through town to the trailhead. Designating this area as wilderness may affect visitation to the Cashmere area due to the high percentage of motorized and mountain bike use of these trails. This is not likely to be offset by an increase in hiking use since the area is more likely to attract local day hikers than out of town visitors due to the lack of water and lack of destinations.

Table 2--Miles of recreation trails

Motorized Trails	Non-motorized Trails	Snowmobile Trails
38	2	0

Wildlife

Lower elevation south slopes in the area provide winter range for a large number of mule deer and some elk. The area is used in the summer by migrating elk from the Colockum unit south of Wenatchee. A variety of other wildlife common to central Washington also inhabits the area. Other species of interest are black bear, goshawk, American marten, bobcat, and cougar.

The area contains habitat for federally listed Canada lynx, gray wolf, grizzly bear, and northern spotted owl. The Canada lynx, gray wolf, and grizzly bear use a variety of successional stages across the landscape as their habitat, while the spotted owl primarily uses late-successional forests. Approximately 15,000 acres of core area would be added for grizzly bears to the Peshastin Bear Management Unit as a result of no longer allowing motorized trail use under a wilderness designation.

Portions of the PWA are inside designated critical habitat for the northern spotted owl, as well as late-successional habitat areas allocated by the Northwest Forest Plan (NWFP). The owl habitat in dry and mesic forest may require future mechanical treatment in order to preserve sustainable habitat. The PWAs provide varying levels of habitat for focal wildlife species. To evaluate the habitat these areas provide, the following information was provided: the focal species emphasized in the area, the amount of habitat for each focal species, the priority ranking for the habitat (based on conservation assessments and recovery plans), and the proportion of the total habitat available on the forest that is within the PWA.

Table 3--Availability of habitat for federally listed Threatened and Endangered wildlife species and R6 Focal Species

Wildlife Species	Acres Habitat	Habitat Priority Ranking (1=high, 2-mod, 3=low)	%Total Forest Habitat In Evaluation Area
Grizzly bear	15,000	2	<1
Canada lynx	2,300	3	2.8
Wolverine	15,400	2	1.3
American marten	2,400	2	0.6

The Endangered Species Act (ESA) requires the Forest Service to manage for the recovery of threatened and endangered species and the ecosystems upon which they depend. Forest Service Manual (FSM) direction provides additional guidance: identify and prescribe measures to prevent adverse modifications or destruction of critical habitat and other habitats essential for the conservation of endangered, threatened, and proposed species (FSM 2670.31 (6)). The Northwest Forest Plan adopted coordinated management direction for federal lands and represents the only existing management plan addressing the conservation of the northern spotted owl across its entire range. The NWFP was developed

using conservation principles similar to those used to designate critical habitat. Specifically, late-successional reserves (LSRs) were designated to provide large blocks of suitable habitat capable of supporting multiple pairs of northern spotted owls. Standards and guidelines of the NWFP provide for the expectation that LSRs will be managed to protect and enhance late-successional and old-growth forest ecosystems. The overlap between critical habitat unit (CHU) and LSR is approximately 70 percent on the Okanogan-Wenatchee National Forest. Providing connectivity among spotted owl populations may be the most important ongoing function of critical habitat, especially in areas where the risk of habitat loss from wildland fire is high.

A key issue relative to the sustainability of wildlife habitats is the identification of the amount of dry forest that is in a late-successional habitat area (LSHA). LSHAs that occur in dry forests can be at high risk of high severity wildfire, insects and disease that reduce the sustainability of the late-successional habitats. Active management such as prescribed fire and thinning may be needed to restore these habitats and enhance their sustainability. Mechanical restoration treatments would not be allowed to occur within a wilderness designation.

Table 4--Acres of dry forest habitats that are present within the evaluation area and also within a Late Successional Habitat Area

Late Successional Habitat Area	Acres of Dry Forest
Swauk	Approx 14,700
Portion of Sand Creek	Approx 1,000

Water and Fish

The Devils Gulch PWA occurs in the Wenatchee subbasin; (4th HUC), with two subwatersheds (6th HUC). Proposed PWA lands in the Wenatchee subbasin are: 15,750 acres (62 percent) of the 25,211-acre Devils Gulch Subwatershed; and 4,079 acres (12 percent) of the 34,477-acre Mission Creek Subwatershed. In these two subwatersheds, the U.S. Forest Service manages the following percentages of the subwatershed: Devils Gulch (93 percent); and Mission Creek (38 percent).

Stream reach conditions in the Devils Gulch subwatershed that respond to natural and human caused disturbances were evaluated as fair because collected stream data values were lower than expected values measured in high functioning stream habitat elsewhere on the Okanogan-Wenatchee National Forest. Subwatershed vegetation conditions were somewhat altered from expected natural forest conditions; analyzed road effects were moderate. Vegetation condition and road effects considered cumulatively were rated fair. When vegetation condition and road effects were combined with measured stream responses to summarize overall subwatershed condition, this subwatershed was rated fair.

When compared against unmanaged subwatersheds in good condition on the Okanogan-Wenatchee National Forest, vegetation condition has changed substantially from expected condition and road density is high for the Mission subwatershed. Considering changes in vegetation and road density in combination, Mission subwatershed was rated poor. Stream reach data has not been collected in sufficient quantity for analysis; therefore, watershed condition and response have not been evaluated.

Habitat supporting listed spring Chinook and steelhead occurs within and downstream of the proposed Devils Gulch PWA, and was designated as Critical Habitat by the National Marine Fisheries Service in January 2006. Listed Steelhead trout spawn in Mission Creek and sometimes enter Devils Gulch. Listed juvenile spring Chinook seek refuge during winter in lower Mission Creek. Resident trout include rainbow, westslope cutthroat, and introduced brook trout. Water within and outside of the PWA in the Mission Creek and Devils Gulch subwatersheds are listed on the State of Washington 303(d) for temperature on U.S. Forest Service managed lands. Stream sediment loads within the Devils Gulch PWA lands can be high after summer thunderstorms erode naturally occurring exposed sandstone.

The Devils Gulch PWA has a water source protection area totaling 7,246 acres that contributes to a community water system for the Cashmere Water Department.

Range

The portion of this area west of Tronsen Ridge is within the Tronsen Recreation Stock Allotment (recreation stock allotments are not depicted in Table 5, as they are annual approvals for recreation purposes and do not fall under the commercial cattle and sheep grazing permits). The allotment inventory map shows only one relatively small suitable range area. The potential for domestic livestock use is limited, although vegetative types in the northern part of the drainage have potential for domestic stock use. The portion of this roadless area within the Mission Creek drainage is outside of any existing allotments. Lack of access into forage areas and the cost of developing unroaded allotments when other areas are available have resulted in little interest or use by livestock owners.

Table 5--Percentage of grazing suitability areas and current allotments

Percent Area Suitable for Cattle Grazing	Percent Area Currently in Cattle Allotments	Percent Area Suitable for Sheep Grazing	Percent Area Currently in Sheep Allotments
1	0	8	0

Vegetation and Ecology

More than two-thirds of the area has been identified as potentially suitable for timber harvest. The remaining area includes both non-forest areas and unsuitable forest areas where shallow soils limit forest cover and growth. Lower elevation dry forests are mostly ponderosa pine and Douglas-fir with grand fir a lesser component. Middle elevation or mesic forests contain mixtures of Douglas-fir, grand fir, and ponderosa pine with lesser amounts of western larch and lodgepole pine. Upper elevation forests are mostly lodgepole pine and subalpine fir with lesser amounts of Douglas-fir, western larch, and ponderosa pine.

Because of the wildland urban interface (WUI) in this area, it is important to retain the ability to manage the dry forest with mechanical treatments. The Healthy Forest Restoration Act (HFRA) authorizes direction to implement fuel reduction projects in the WUI. The HFRA prohibits authorized projects in wilderness areas. Generally, the priority

for restoration treatments occurs within the WUI or within the dry and mesic forest groups. The dry forest group occurs on over two thirds of the PWA. Because WUI is approximately 17 percent of the PWA, the prohibition on mechanical vegetative treatments if designated wilderness is also a concern.

Timber Harvest Suitability

The underlying criteria for determining timber harvest suitability are found in the Forest and Rangeland Renewable Resources Planning Act of 1974, 36CFR219.12, and Forest Service Handbook 1909.12, Chapter 60.

For the Colville and Okanogan-Wenatchee National Forests, the general criteria for timber suitability that will be used for timber harvest suitability are:

- Is it forest land (10 percent crown cover minimum, productivity >20 ft^3/ac/yr).
- The area has not been withdrawn from timber harvest or production.
- Soil, slope, or other watershed conditions will not be irreversibly damaged (based on soil attributes for erosion, instability, or compaction potential, slopes >65 percent, and certain land types)
- Reforestation can be assured within five years (lack of shallow soils, low frost heave potential, low surface rock, plant community type, certain land types, and elevation <5,500 feet)
- Economic and technologic viability (<0.5 miles from existing transportation system, species value or condition, volume availability, logging systems)

In consideration of all the criteria for determining timber harvest or timber production suitability and not just the fact that harvestable species can grow at a specific location, it appears this PWA does not have conditions that pass all the criteria. The main criterion for failure is that unacceptable resource impacts would likely occur due to road construction activities. This does not preclude helicopter operations that could fly material over sensitive areas to adjacent road systems. However, in most if not all cases helicopter logging and the associated expenses (such as manual slash treatments) would not be an economically viable option.

Table 6--Stand data percentages

Suitable for Timber Harvest	Forest Groups		WUI	
0%	Parkland	0%	Total WUI	17%
	Cold Dry	5%	WUI in Dry and Mesic Forest	52%
	Cold Moist	18%		
	Mesic	6%		
	Dry	65%		
	Non-forest	6%		

Fire

Annual fire occurrence is light to moderate with most started by lightning. More than half the area is dominated by dry forests of ponderosa pine, Douglas-fir, and dry grand fir plant

associations that historically had a frequent, low-severity fire regime. These dry forests generally occur at elevations below 3800 feet to 4600 feet depending on aspect. Middle and upper elevation forests include both moist grand fir plant associations (mesic forests) and subalpine fir plant associations (cold dry forests) that had mixed and high-severity fire regimes. Seral lodgepole pines typically dominate stands within the subalpine fir series.

Historic grazing, logging and road construction in the lower elevations of Sand Creek, Devils Gulch, Peshastin Creek, and fire exclusion have created uncharacteristic stand structures, insect and disease occurrence, and fuel loading, especially in the dry forest parts of the area. Shade tolerant host species (grand fir, Douglas-fir and subalpine fir) have increased while seral, shade intolerant host species (ponderosa pine, lodgepole pine and western larch) have decreased in numbers. Dry forests are seven to ten or more fire intervals outside their normal fire cycle. Mesic forests are likely two to four fire intervals outside their normal fire cycle. Dry forests, and to a lesser degree mesic forests, are not in a ecologically pristine or medieval condition and are currently at high risk to uncharacteristically high-severity fire.

Insects and Disease

The Wilderness Act of 1964 allows for the control of insects and disease, but taking such actions in wilderness is rare. Forest Service wilderness policy (Forest Service Manual 2324.11) directs the agency "to allow indigenous insect and plant diseases to play, as nearly as possible their natural ecological role". Policy also directs the agency to "protect the scientific value of observing the effect of insects and disease on ecosystems and identifying genetically resistant plant species", and finally, "to control insect and plant disease epidemics that threaten adjacent lands or resources."

An aerial survey of this PWA was completed in the vicinity of this PWA in 2007. The most extensive damaging agent reported in the Mission Ridge area was western spruce budworm. About 3,500 acres of defoliation was observed, all south of Crow Canyon. This is about three times the area of defoliation mapped in 2006, and ten times the area mapped in 2005.

Western spruce budworm prefers to feed on grand fir and Douglas-fir, but will also feed on spruce, subalpine fir and western larch. Western spruce budworm populations have been increasing throughout the Forest since 1999. Grand firs that are defoliated will become more susceptible to the fir engravers that are already active in the analysis area. Indirect control through silviculture is the most effective way of reducing budworm impacts over the long term. Stands with a large percentage of preferred host species will support an outbreak longer than stands with less host species. Multi-storied stands will also sustain outbreaks longer than single-storied stands, since they will provide dispersing larvae with readily available food and shelter from predators. Direct control with pesticides may be appropriate in certain areas where important resources could be lost if host trees are defoliated.

Six pockets of fir engraver damage were mapped, totaling 350 acres. This is about the same amount of damage reported in 2006. Fir engravers are bark beetles that attack true firs. Their activity is often associated with root disease. They are also attracted to trees under stress from drought, defoliation or other damage. On the Wenatchee River Ranger

District, grand fir is the common host. Trees that are attacked may be killed outright, or they may survive with top-kill. It is likely that the amount of fir engraver activity was underreported, since bark beetle attacks on defoliated trees cannot be detected from the air.

Five pockets of damage by western balsam bark beetle were mapped on the ridge between Mount Lillian and Naneum Point, totaling about 250 acres. Damage to subalpine firs has been reported in this area for the last three years. Western balsam bark beetle attacks subalpine firs that are stressed by drought or other damage. These beetles are thought to build up high populations in subalpine fir blowdown. When beetle populations are high, they can more easily attack and kill healthy trees. Removing blowdown may be a way of reducing tree-killing by these beetles.

Three pockets of balsam woolly adelgid were mapped on the ridge near the western balsam bark beetle damage. Balsam woolly adelgid is a European insect that was introduced to North America in the early 1900s. Any true fir can be a host, but subalpine fir is the most susceptible species on the District. Feeding by this sucking insect causes branch gouting and flagging, growth loss, wood degradation, and eventual tree death. Twenty-three species of predators were introduced between 1957 and 1964 in order to control this insect. Five of these species are established but do not appear to be reducing the balsam woolly adelgid population in any significant way. There is considerable difference in both individual tree and site susceptibility.

Decline of subalpine fir has been noted in many places in eastern Washington. Some of the damage attributed to western balsam bark beetles or balsam woolly adelgids has been caused by other agents, including *Pityoktines minutus* beetles and *cytospora* canker. Firs that have been stressed by factors such as drought or root disease become susceptible to secondary bark beetles and weak pathogens. Field verification may be necessary to determine the causes of subalpine fir decline and mortality.

Very little damage by mountain pine beetles was reported. A single 45-acre pocket of lodgepole pine killed by mountain pine beetles was mapped in upper Ruby Creek. Reports of mountain pine beetle activity have decreased in the last three years.

No larch needle disease was reported.

Three small (less than 70 acres) pockets of Douglas-fir beetle activity were mapped in Camas Creek. Douglas-fir beetles are bark beetles that attack weakened Douglas-firs. They often build up populations in blowdown or in Douglas-firs that have been severely stressed by defoliation, root disease, fire, or other damage. If substantial quantities of this breeding material are available the beetle population may increase to damaging levels, attacking and killing large, healthy Douglas-firs. Damage from this insect can be reduced by removing blowdown or damaged Douglas-fir before the developing larvae mature and disperse.

Threatened, Endangered, and Sensitive Species

There are several sensitive plant species that have been recorded in this area, these include: cutleaf anemone (*anemone nuttalliana*), tortured horsehair lichen (*Bryoria tortuosa*), clustered lady's slipper *(Cypripedium fasciculatum),* longsepal wild hollyhock (*Iliamna longisepala*), Thompson's pincushion *(Chaenactis thompsonii),* and Whited's penstemon *(Penstemon eriantherus var. whitedii).*

Noxious Weeds

Diffuse knapweed has been introduced into the Devils Gulch PWA.

Minerals and Soils

This area is underlain by early tertiary aged sedimentary rocks of the Swauk and Chumstick formations. A fairly large tertiary intrusive body lies several miles to the northeast of the area, which is of interest for the related gold potential of what is termed the Wenatchee Gold Belt. The entire area has been classified "prospectively valuable" for both oil and gas, and coal resources by the U.S.G.S., and the Bureau of Land Management classifies the area as having a high potential for the occurrence of oil and gas resources. The south half of the area has been nominated as an "area of critical mineral potential" through a Bureau of Land Management nomination process.

Even though the roadless area has no proven mineral resources of a significant nature, there has been interest in the area. For instance, there have been many placer claims located within or immediately adjacent to the area. Assessment work has not been maintained on any of these claims; however, so all have been terminated by the Bureau of Land Management. There are currently no mining claims located within or adjacent to the roadless area.

The area has been leased for its oil and gas resources, but it did not experience any exploration drilling so its actual oil and gas potential is not known. These leases terminated in the late 1980s to the early 1990s. Currently, there are no expressions of interest in the potential oil and gas or coal resources of the area.

Bedrock underlying the area is sandstone, siltstone, and conglomerate of the Swauk and Chumstick formations. Larger stream bottoms are filled with sands and silts from adjacent slopes.

The combination of geography, land type, and precipitation produce moderate to high inherent soil productivity. Productivity for wood fiber is moderate. Due to parent material and soil development, most of the soils within this area have a moderate to high erosion hazard, and are quite susceptible to compaction. The soils have excellent bearing capacity.

Cultural and Heritage Resources

Tronsen Ridge, Mount Lillian, and Upper Naneum Meadow were reportedly used in prehistoric times for travel, food, and for the collection of household materials. There are no known archaeological sites, although field surveys have been limited. Historic uses include small-scale mining, trapping, and sheep grazing. Unless a site has been determined to be ineligible for the National Register, it is managed as a significant site until such a determination is made. Cultural sites are protected by law; however, a wilderness designation or a roadless designation would afford additional protection to cultural sites from ground disturbing activities.

Land Uses and Special Uses

Other than the occasional and temporary use of the area by outfitters and guides under permit or the occasional authorization of a recreation group event, there are no special land uses occurring within the area.

The Devils Gulch potential wilderness area falls entirely within lands ceded to the U.S. Government under the Yakama Treaty. Indian tribes hold rights reserved under treaty and recognized in statutes, executive orders, and policies. Generally, these included rights to fish at usual and accustomed grounds and stations, the right to hunt and gather on open and unclaimed lands, the right to erect temporary houses to cure fish, and the right to pasture horses and cattle on open and unclaimed lands.

Private Lands

There are two small parcels of private land within this PWA; one is only accessed by trail, and the other has a road system to it. Neither have a trail easement.

NEED FOR WILDERNESS

Location and size of other wildernesses in the general vicinity, and distance from proposed area and population centers:

The Devils Gulch area is closest to the Alpine Lakes Wilderness (362,789 acres), which is just four miles away. Further north and west is the Henry M. Jackson Wilderness (100,356 acres). The Glacier Peak Wilderness (570,573 acres) is also nearby. The area is a thirty minute drive from Wenatchee, and is within two to four hours of driving time from population centers such as Seattle-Tacoma, Yakima, Tri-Cities, and Spokane.

In ranking this PWA for its potential to provide a high quality wilderness recreation setting it ranked as high due to the sandstone formations providing a geological setting not represented within wilderness in the planning area. There is an interconnected trail system, but overnight use would be very low due to a lack of camping opportunities near water.

Present visitor pressure on other wildernesses, and trends and changing patterns of use:

Nearby wildernesses include the Glacier Peak, Henry M. Jackson, and Alpine Lakes. These and other wildernesses throughout the state serve a growing population from both sides of the Cascade Range. Most of the users are from the greater Puget Sound area. The portions of these wildernesses with easy access to spectacular destinations receive heavy use. However, in general, there is already adequate wilderness on the east slope of the Cascade Range to absorb current and future recreation demand while maintaining moderate to low levels of use. The addition of this area would probably decrease overall use since its popularity is primarily with mountain bikers and motorcyclists. Hiking use would probably increase slightly, and equestrian day use would rise more significantly due to eliminating the conflict with mountain bikes.

Extent to which non-wilderness lands provide opportunities for unconfined outdoor recreation experiences:

Local mountain bikers and hikers have expressed interest in creating additional non-motorized trail opportunities in the lower Wenatchee valley; however, this demand is not contingent on large roadless areas and would not be satisfied by designating Devils Gulch as wilderness.

The Alpine Lakes Adjacent PWA contains many separate parcels surrounding the periphery of the wilderness. These parcels are very diverse in the recreation opportunities they afford. The areas closest to Devils Gulch provide no additional recreation opportunities.

Lion Rock is a very small motorized roadless area just south of Devils Gulch. It offers limited opportunities for unconfined recreation due to its small narrow configuration and the proximity of roads.

To the west, the Teanaway PWA features an extensive trail system that is both motorized and non-motorized. Many of the trails provide access to the Alpine Lakes Wilderness. The area also has extensive winter use from snowmobilers, skiers, and snowshoers. Snowmobile incursions into wilderness are a problem from this area. The area is characterized by dry timber types rising to rocky serpentine ridge lines.

Nason Ridge is a high quality backcountry area that provides a trail system to high lakes, ridges, and peaks. The Nason Ridge area fulfills an important niche for users that are not wholly wilderness compliant (large groups or cyclists) but otherwise want an alpine natural environment in which to recreate. Nason Ridge generally receives moderate levels of use, with high hiker use on the popular Merritt Lake Trail.

The Heather Lake Roadless Area lies adjacent to the Henry M. Jackson Wilderness, and is accessed via the Heather Lake, Top Lake, and Minotaur Lake Trails. Heather and Minotaur Lakes receive moderately high use, and Top Lake receives light to moderate use from hikers and horse users.

To the north, the Twin Lakes Roadless Area primarily provides access to the Glacier Peak Wilderness. The Twin Lakes Trail travels about one mile through this area before entering the Glacier Peak Wilderness. Because this trail is adjacent to the Tall Timbers Ranch it receives a high visitation rate from organized groups.

Further to the north, the Entiat-Chelan Roadless Area provides a network of non-motorized and motorized trails, also adjoining the Glacier Peak Wilderness. The Rock Creek portion of this PWA receives less use due to the absence of lakes, but does attract light levels of use. The Carne Mountain Trail attracts high levels of use from hikers, climbers, and hunters. The Entiat portion of this PWA provides the only other motorized network of trails on the Wenatchee River Ranger District, and ties into a much more extensive system on the Entiat and Chelan Ranger Districts.

The need to provide a sanctuary for those biotic species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific value or phenomena:

Geological

Some opportunity exists for scientific study in relationship to the geology of the area. The sandstone formations in this PWA are not represented in existing wilderness within the planning area.

Wildlife

The Devils Gulch PWA provides habitat for species that require primitive surroundings; goshawk, Canada lynx, American marten, grizzly bears, gray wolves, and wolverines. The wildlife sustainability index is 17.1 (a moderate relative ranking) and the habitat connectivity index is 18.9 (also moderate relative ranking). A high priority wildlife issue is the need to restore dry forest habitats for the northern spotted owl, and reduce the risk of habitat being burned in high severity fires. This requires active management that would not be allowed under a wilderness designation.

Fish

Several native species in the interior Columbia River Basin have demonstrated an inability to survive in less than primitive surroundings, especially the bull trout. In addition to habitat changes on National Forest System lands, other factors off forest such as hydropower generation, hatchery programs, harvest, and changing ocean conditions further challenge the persistence of some far-ranging native species. Broad-scale assessments have demonstrated a positive correlation between unroaded areas and persisting native fish stocks. Often, assessments like these don't differentiate between wilderness and roadless areas; rather they combine the two into an "unroaded" category. These assessments show current strongholds (most secure and robust populations) are dependant on wilderness and roadless areas. Some of the more resilient native fish populations in the Interior Columbia Basin are located in unroaded areas on National Forest System lands.

For the Okanogan-Wenatchee National Forest, PWAs were assigned an aquatic ranking based on federally listed and sensitive fish species that are sensitive to human disturbances. A high ranking was assigned when listed fish species occur in the PWA or when ecological process including high quality water help sustain listed fish species downstream of the PWA. All other PWAs are ranked low. This PWA is assigned a high ranking based on these factors.

Rare Plant Species

An analysis was completed to prioritize which PWAs would contribute the most to providing refugia for those plant species on the species of interest/species of concern (SOI/SOC) list. The analysis ranked three factors. The first factor, the total number of sites occurring within the PWA, ranked as moderate for this PWA. The second factor, which also ranked as moderate for this PWA, examined the degree of rarity of any SOI/SOC

species present, and also recognized the importance of individual PWAs in supporting a high incidence of populations relative to Washington State as a whole.

PWAs are generally unsurveyed for rare plants due to a relative lack of projects occurring in these areas. Thus an additional factor examined the potential for the PWA to support SOI/SOC species. Based on databases, first the SOI/SOC plant species were identified that are present within a five-mile radius of the PWA, but are not known to occur within the PWA. Then the PWA was analyzed to see if the potential habitat for these species occurs within the PWA. Based on this analysis, this PWA ranks as high.

Finally, a composite score was assigned to each PWA based on combining each of the rankings described above. This PWA ranks overall as high priority for preserving rare plant refugia with a wilderness designation.

Ability to provide for preservation of identifiable landform types and ecosystems:

The Swauk sandstone formations present in the Devils Gulch PWA are not represented in other wilderness or wild areas and are worthy of protection for their scientific value.

This area represents the East Cascades Ecoregion as classified using Bailey's Ecoregion Classification System, which is well-represented in existing wilderness lands in the Cascade Range.

An analysis compared vegetative cover types that are under-represented in wilderness on the National Forest System in Region 6 with those same cover types present in the PWA. Large-scale cover types were available through existing data layers and represent approximately 12 percent of the vegetative cover of this PWA (approximately 2,490 acres). These types include forb lands, non-alpine meadows, and ponderosa pine. Taken as a whole, the contribution of underrepresented vegetation types ranks as high for the portion of this area with underrepresented cover types, and also as high for the number of acres that are represented within this PWA relative to the other PWAs in the planning area.

Some under-represented cover types fill microhabitats such as riparian areas or perched water tables. Such finer scale cover types represented in this PWA include abundant amounts of cottonwood and red alder, and sparse amounts of quaking aspen.

In particular, the ponderosa pine, forb lands, and cottonwood cover types would make a significant contribution within the eastern Washington planning area.